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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Ramesh Nagarajan

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EXAMINER

WILSON, ROBERT W

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,187

Applicant(s)

NAGARAJAN ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-10 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-10 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 6, & 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (U.S. Patent No.: 6,724,722).

Referring to claim 1, Wang teaches: C which is a node which grooms signals from A or client into a high capacity signal per Fig 1 or per col. 5 lines 33-56. C has an interface which is coupled via link CD or high capacity trunk to F which is an edge node or type 1 node per Fig 1 or per col. 5 lines 33-56. C has another interface which is coupled to a non-edge node E or type 2 node via link CE or high capacity trunk. The traffic is split over the two routes which the examiner interprets as wherein only a portion of those low capacity client signals destined for the F or type 1 node are groomed into the high capacity trunk to E or type 2 node per Fig 1 or per col. 5 lines 33-56.

Referring to claim 6, Wang teaches: Node C is an apparatus for selectively grooming signals from A or client per Fig 1 or per col. 5 lines 33-56. C is coupled directly to a non-edge node E or type 2 node via link CE or high capacity trunk. C is also coupled to link CD or high capacity trunk to F which is an edge node or type 1 node per Fig 1 or per col. 5 lines 33-56. The traffic is split over the two routes which the examiner interprets as only a portion of the client signals destined for the F or type 1 node are groomed into the high capacity trunk to E or type 2 node per Fig 1 or per col. 5 lines 33-56.

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Referring to claim 14, Wang teaches: Node C performs the method per Fig 1 or per col. 5 lines 33-56. Node C receives signals from A or low capacity client signals per Fig 1 or per col. 5 lines 33-56. Node C splits the traffic over the two routes which the examiner interprets as selectively grooming a portion of the received low capacity client signals into a high capacity trunk for transmission to the F or type 1 node and transmitting others of the low capacity client signals over link CE or high capacity trunk to E or 2nd type of node wherein the traffic is split over the two routes which the examiner interprets as others of the low capacity signals transmitted over the other high capacity trunk comprise low capacity client signals destined for the F or type 1 node are groomed into the high capacity trunk to E or type 2 node per Fig 1 or per col. 5 lines 33-56.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 8, & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent No: 6,724,722).

Referring to claim 3, Wang teaches the apparatus of claim 1.

Wang does not expressly call for: wherein the type two node is high traffic node.

The applicant broadly claims a “wherein the type 2 node as a high traffic node”. It would have been obvious design choice to send more traffic through E or type 2 node because there is more link capacity available or in other words make it a high traffic type 2 node.

Referring to claim 8, Wang teaches the apparatus of claim 6.

Wang does not expressly call for: wherein the first node is a low traffic node and the second node is a high traffic node.

The applicant broadly claims a “first node is a low traffic and the 2nd node as a high traffic node”. It would have been obvious design choice to send more traffic through E or type 2 node

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because there is more link capacity available or in other words make it a high traffic type 2 node and less traffic to F.

Referring to claim 16, Wang teaches the method of claim 14,
Wang does not expressly call for: wherein the groomed portion is zero
Wang teaches: splitting the traffic based upon demand per Fig 1 or per col. 5 lines 33-56.

It would have been obvious to one of ordinary skill in the art at the time of the invention that if it is not necessary to split the traffic then to perform zero grooming.

5. Claims 4, 9, 17, & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent No: 6,724,722) in view of the applicant's specification admitted prior art.

Referring to claim 4, Wang teaches the apparatus of claim 1.

Wang does not expressly call for: wherein the type one node is a cable station and the type two node is a central office.

The applicant's specification that a CO can pass traffic and that the CS acts as device in the branch to split traffic out per Pg 3 line 5-Pg 4 line 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to call F or type 1 node a cable station because it performs receiving split traffic or function of a cable station and the E node or type 1 node pass data through or performs the function of the CO.

Referring to claim 9, Wang teaches the apparatus of claim 6.

Wang does not expressly call for: wherein the type one node is a cable station and the type two node is a central office.

The applicant's specification that a CO can pass traffic and that the CS acts as device in the branch to split traffic out per Pg 3 line 5-Pg 4 line 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to call F or type 1 node a cable station because it performs receiving split traffic or function of a cable station and the E node or type 1 node pass data through or performs the function of the CO.

Referring to claim 17, Wang teaches the apparatus of claim 14.

Wang does not expressly call for: wherein the type two node is a cable station and the type one node is a central office.

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The applicant's specification wherein the type two node is a cable station and the type one node is a central office per Pg 3 line 5-Pg 4 line 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention wherein the type two node is a cable station and the type one node is a central office because according to applicant it is well known in the art.

Referring to claim 18, Wang teaches the apparatus of claim 14.

Wang does not expressly call for: wherein the second type of node is a low traffic node and the first type of node is a high traffic node.

The applicant's specification teaches wherein the second type of node is a low traffic node and the first type of node is a high traffic node.

It would have been obvious to one of ordinary skill in the art at the time of the invention wherein the second type of node is a low traffic node and the first type of node is a high traffic node because according to applicant it is well known in the art.

6. Claims 5, 10, & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent No: 6,724,722) in view of the Tyrrell (U.S. Patent No.: 5,185,736)

Referring to claim 5, Wang teaches the apparatus of claim 1.

Wang does not expressly call for: wherein the low capacity client signals comprise plesiochronous digital hierarchy signals and the high capacity signal comprise a synchronous transport mode signal

Tyrrell teaches: converting client signals from synchronous to pleischronous digital hierarchy signal and the high capacity signal comprise a synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion of Tyrrell to the network the apparatus of Wang in order to cost effective convert the client signals.

Referring to claim 10, Wang teaches the apparatus of claim 6.

Wang does not expressly call for: wherein the low capacity client signals comprise plesiochronous digital hierarchy signals and the high capacity signal comprise a synchronous transport mode signal

Tyrrell teaches: converting client signals from synchronous to pleischronous digital hierarchy signal and the high capacity signal comprise a synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion of Tyrrell to the network the apparatus of Wang in order to cost effective convert the client signals.

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Referring to claim 15, Wang teaches the method of claim 14, Wang does not expressly call for wherein the low capacity client signals and the high capacity trunk supports a synchronous transport module signal

Tyrrell teaches: converting client signals from synchronous to pleisynchronous digital hierarchy signal and the high capacity signal comprise a synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion of Tyrrell to the network the apparatus of Wang in order to cost effective convert the client signals.

7. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (U.S. Patent No: 6,724,722) in view of Dravida (U.S. Patent No.: 5,253,248)

Referring to claim 19, Wang teaches the apparatus of claim 1 wherein grooming of the portion of those low capacity client signals destined for F which is a type 1 node is being performed by C which is also a type 1 node and a portion of the traffic is being through E which is a type 2 node per Fig 1 or per col. 5 lines 33-56.

Wang does not expressly call for determining the amount of traffic split based upon a threshold.

Dravida teaches: determining the amount of traffic split based upon a threshold per col. 3 lines 10-45.

It would have been obvious to add the thresholding of traffic of Dravida to the apparatus of Wang in order to prevent route oscillations.

Referring to claim 20, the combination of Wang and Dravida teaches: the apparatus of claim 1 and the type one nodes.

The combination does not expressly call for: if said amount of traffic between said type one node and said another type one node exceeds said threshold provisioning at least one additional trunk between said another type one node and said type one node.

Dravida teaches: adding an additional route when the congestion exceeds a threshold which the examiner interprets provisioning at least one additional trunk between said another type one node and said type one node per col. 3 lines 10-45.

It would have been obvious to add the thresholding of traffic of Dravida to the apparatus of Wang in order to prevent route oscillations.

Claim Objections

8. Claims 1, 3-6, 8-10, 16, 17, and 19-20 are objected to because of the following informalities:

Referring to claims 1 & 6, the examiner objects to the fact that there are two high capacity trunks in the claim and they are both referred to as high capacity trunks and they are different high capacity trunks. The examiner suggests amending the claim 1 to "A node for grooming low capacity client signals into a high capacity signal comprising: an interface to a 1st high capacity trunk for coupling to a type one node and an interface to a 2nd high capacity trunk for coupling to a type two node; wherein only a portion of those low capacity client signals destined for the type one node are groomed into the high capacity trunk to the type two node. The examiner suggests amending claim 6 to "An apparatus for performing selective grooming of client signals, the apparatus comprising: a node coupled (a) directly to a first node via a 1st high capacity trunk , and (b) to second node via a 2nd high capacity trunk such that only a portion of the client signals destined for the first node are groomed into the 2nd high capacity trunk to the second node

Referring to claim 10, the limitation wherein the groomed portion is zero is confusing. The examiner suggests deleting the claim.

Referring to claims 4, 9, & 17, the examiner believes that the applicant reference to the cable station is repugnant to the art and therefore objects to this claimed limitations. In the applicant specification that is admitted prior art the applicant defines a cable station as associated with a branch unit which has the ability to simply switch Fibers within a cable bundle the examiner per Pg 3 line 5 through Pg 4 line 18. In Figures 7-8 of the specification the applicant defines the cable station as having capabilities of an add drop multiplexer can split E1s between central offices. The applicant has defined two versions of cable station. It is the examiner's opinion upon searching the prior art that the admitted prior art is consistent with prior art teachings for a cable station. In other words the prior art teaches that a cable station is a simple switching box and the applicant appears to be using cable station as if it is a location for storing a sophisticated add drop multiplexer switch which is inconsistent with prior art teachings for a cable station.. The examiner suggests that the applicant either delete the claims or rename the new cable station something else and amend the specification according to the new name without adding new matter. Appropriate correction is required.

Response to Amendment

9. Applicant's arguments with respect to claims 1, 3-6, 8-10, & 14-20 have been considered but are moot in view of the new ground(s) of rejection. Please refer to the above rejection for details.


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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**BOB PHUNKULH
PRIMARY EXAMINER**

RWW
9/21/05



**Robert W Wilson
Examiner
Art Unit 2661**